

STATEMENT OF LEGAL AND FACTUAL BASIS

DuPont – Spruance Plant
5401 Jefferson Davis Highway
Richmond, Virginia
Permit No. PRO-50397

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, DuPont has applied for a significant modification to the Title V Operating Permit for its Richmond, Virginia facility. The Department has reviewed the application and has prepared a draft significant modification to the Title V Operating Permit.

Engineer/Permit Contact:_____

Date:

Air Permit Manager:_____ Date:

Deputy Regional Director:_____

Date:

FACILITY INFORMATION

Permittee

DuPont – Spruance Plant
5401 Jefferson Davis Highway
Richmond, Virginia 23234

Responsible Official

Rick L. Hodge
Plant Manager

Facility

DuPont – Spruance Plant
5401 Jefferson Davis Highway
Richmond, Virginia 23234

Contact Person

Joe G. Loschiavo
Environmental Associate
804-383-3911

County-Plant No.: 053-0001

SOURCE DESCRIPTION

SIC Code 2824 – The facility manufactures synthetic resins, fibers and sheet products, polyamide resins and spunbonded/non-woven fabric through a variety of processes.

The facility has submitted an application, dated April 14, 2005, for a significant modification to their Title V operating permit, originally issued July 14, 2004. The application requests the inclusion of new applicable requirements in the Title V operating permit. The source of the new requirements is the recently promulgated (September 13, 2004) National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters (Boiler MACT). Certain requirements of the Boiler MACT apply to the new Zytel process area Dowtherm Heater VAP-3R which commenced operation on January 19, 2005. Since VAP-3R is a natural gas fired unit with a maximum rated heat input capacity of 20 MMBtu/hr, it was exempted from new source review (NSR) requirements only by DEQ in a letter dated 12/2/2003. Accordingly, the Boiler MACT is the only source of applicable requirements for this unit.

COMPLIANCE STATUS

The facility is inspected once a year. The facility reports that they are currently in compliance with all applicable requirements. This is confirmed by the latest inspection, dated 12/2/2005, where the facility was judged to be in compliance at the time of the inspection.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Equipment to be operated consists of:

Zytel® Process Area						
ZYE12	N/A	Dowtherm Vaporizer VAP-3R	20 MMBtu/hr	N/A	N/A	N/A

Note: only the unit involved in the proposed significant modification is included above.

EMISSIONS INVENTORY

An emission update was received for the year 2004. The actual annual emissions from the facility were reported as 25.8 tons of PM10, 427.6 tons of VOC (of which 10.9 tons were HAPs; primarily chloroform), 5.4 tons of NOx and 2.6 tons of CO.

EMISSION UNIT APPLICABLE REQUIREMENTS

The Title V permit is being revised to incorporate the applicable requirements from 40 CFR 63, Subpart DDDDD; National Emission Standards for Industrial Boilers and Process Heaters. There are four emission units at the source which are subject to the Subpart 5D, all in the Zytel Process Area: three existing natural gas-fired Dowtherm vaporizers (boilers; Reference #ZYE08-10) with maximum rated heat input capacities of 14.5 MMBtu/hr each and one new natural gas-fired Dowtherm vaporizer (boiler; Reference #VAP-3R) with a maximum rated heat input capacity of 20 MMBtu/hr. All four units are included in the Subpart 5D “Large Gaseous Fuel Subcategory” since 40 CFR 63.7575 defines this subcategory as follows: *Large gaseous fuel subcategory* includes any watertube boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent. Unit VAP-3R, constructed in 2004, is further classified as “new” since 40 CFR 63.7490(b) classifies units constructed after January 13, 2003 as “new”. Conversely, emission units ZYE08-10 were all constructed prior to 1/13/2003 and are therefore considered to be “existing”. This “existing” status is important because 40 CFR 63.7505(b)(1) exempts existing large gaseous fuel units from all Subpart 5D requirements (except for the already initial notification requirements of 40 CFR 63.9(b)). Therefore, the only emission unit at the source subject to Subpart 5D applicable requirements is Dowtherm vaporizer VAP-3R. The Subpart 5D applicable requirements for the unit are listed below (note: the existing Zytel applicable requirements from the original Title V permit have been included and have been *italicized*:

A. Limitations & Monitoring

60. Carbon Monoxide emissions from the Dowtherm Vaporizer VAP-3R shall not exceed the following work practice standard from 40 CFR 63.7500:

- 400 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average).

(9 VAC 5-80-110 and 40 CFR 63.7500 of Subpart DDDDD)

61. The permittee shall develop and implement a written start-up, shutdown and malfunction (SSM) plan for the Dowtherm Vaporizer VAP-3R as specified in 40 CFR 63.6(e)(3). During periods of start-up, shutdown and malfunction, the permittee shall operate VAP-3R in accordance with the SSM plan as required in 40 CFR 63.7505.
(9 VAC 5-80-110, 40 CFR 63.7505(e), 63.7540(c) and 63.6(e)(3))
62. *The Dowtherm operations in the Zytel® process area shall institute fugitive leak detection and repair (LDAR) procedures to correspond with the standards of 40 CFR 60 Subpart VV except that equipment shall be considered to be leaking when a reading above 500 ppm of VOC (i.e., an action level of 500 ppm) is obtained using an approved measurement technique.*
(9 VAC 5-80-110 and Condition E.12 of 5/30/1996 RACT Agreement)

B. Testing and Recordkeeping

63. The permittee shall conduct performance testing as follows:
 - a. Annual performance tests shall be conducted for Carbon Monoxide for the Dowtherm Vaporizer VAP-3R, using EPA Reference Method 10, 10A or 10B to determine compliance with the work practice standard in condition 60. The tests shall be performed, and demonstrate compliance annually, within 10-12 months of the previous performance test.
(40 CFR 63.7515(e))
 - b. During these tests, the permittee shall operate VAP-3R at the maximum normal operating load.
(40 CFR 63.7520(d))
 - c. As specified in 40 CFR 63.7(e)(3), the permittee shall conduct three (3) separate test runs for each performance test. Each test run shall last at least one (1) hour.
(40 CFR 63.7520(f))
 - d. Tests shall be conducted and reported and data reduced as set forth in 40 CFR 63.7 and the test methods and procedures listed above.
(40 CFR 63.7520(a) and 63.7)
 - e. A Notification of Intent to conduct a performance test and a site-specific test plan developed in accordance with 40 CFR 63.7(c) shall be submitted to the Director, Piedmont Regional Office for approval at least sixty (60) calendar days before a performance test is scheduled to take place.
(40 CFR 63.7520(a), 63.7545(d) and 63.7(b-c))
 - f. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within sixty (60) days after test completion.
(40 CFR 63.7515(g))

(9 VAC 5-80-110 and 40 CFR 63 Subparts A and DDDDD)

64. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:
- a. Copies of each notification and report that you submitted to comply with 40 CFR 63 Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).
 - b. For VAP-3R, records of performance tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in §63.10(b)(2)(viii).
 - c. The records in 40 CFR §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110 and 40 CFR 63.7555(a)(1-3))

65. *Records shall be kept at the facility in accordance with 40 CFR 60.486 and shall be submitted to the Piedmont Regional Office upon request. These records shall be available for inspection by the DEQ and shall be current for the most recent five years. (9 VAC 5-80-110 and Condition #E.12 of 5/30/1996 RACT Agreement)*

C. Reporting

66. *The Dowtherm operations in the Zytel® process area shall not be subject to the reporting requirements in 40 CFR 60.487. (9 VAC 5-80-110 and Condition E.12 of the 5/30/1996 RACT Agreement)*
67. The permittee shall submit the following reports to demonstrate compliance with this permit. The content of and format of such reports shall be arranged with the Director, Piedmont Region. These reports shall include, but are not limited to:
- a. Compliance Reports containing the information specified in 40 CFR 63.7550(c)(1-11) and 63.7550(d)(1-4) as applicable. These reports shall be submitted semiannually, no later than 30 days after the end of each 6-month period: July 31 for the January 1 to June 30 semi-annual period and January 31 for the July 1 to December 31 semi-annual period.
 - b. Immediate Start-up, Shutdown and Malfunction Reports containing the information

specified in 40 CFR 63.10(d)(5)(ii) and the actions taken for the event. These reports shall be submitted if a SSM event occurs during the reporting period that is not consistent with the SSM plan and the source exceeds the work practice standard of condition 60. These reports shall be submitted within the timeframes specified in Table 9 of 40 CFR 63 Subpart DDDDD.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and 40 CFR 63.7550)

The above requirements include applicable emission standards/work practice requirements as well as applicable monitoring, testing, record keeping and reporting requirements from 5D. By EPA and DEQ policy all MACT standards are presumed to include compliance mechanisms (testing, reporting, etc.) sufficient to meet Title V periodic monitoring requirements.

FACILITY WIDE REQUIREMENTS

There are no changes to any facility wide requirements associated with this significant modification.

Obsolete Requirements

There are no new obsolete requirements associated with this significant modification.

Streamlined Requirements

There are no new streamlined requirements associated with this significant modification.

GENERAL CONDITIONS

There are no changes to any general conditions associated with this significant modification.

STATE ONLY APPLICABLE REQUIREMENTS

No State-Only requirements were identified.

FUTURE APPLICABLE REQUIREMENTS

There was no change in future applicable requirements associated with this significant modification.

INAPPLICABLE REQUIREMENTS

No new inapplicable requirements identified.

INSIGNIFICANT EMISSION UNITS

There was no change in insignificant emission units associated with this significant modification.

CONFIDENTIAL INFORMATION

There was no change in confidential information associated with this significant modification.

PUBLIC PARTICIPATION

The draft permit went to public notice in the Richmond Times-Dispatch on December 23, 2005. The 30-day comment period specified in the public notice runs from December 23, 2005 through January 21, 2006. The draft permit was also concurrently reviewed by EPA Region III beginning on December 23, 2005. The 45-day EPA review period expired on February 5, 2006. No comments of any kind were received about this application.